

**AMENDMENTS TO THE CLAIMS**

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1. (Original) A polycarboxylic acid copolymer  
which is obtained by copolymerization of monomer components comprising a polyalkyleneimine unsaturated monomer (A1) and an unsaturated carboxylic acid monomer (B).
2. (Original) The polycarboxylic acid copolymer according to Claim 1,  
wherein said polyalkyleneimine unsaturated monomer (A1) has an oxyalkylene group.
3. (Currently amended) A polycarboxylic acid copolymer  
which is obtained by copolymerization of monomer components comprising a polyalkylene glycol unsaturated monomer (A2) having a structure such that an oxyalkylene group is bound to a polyhydric alcohol residue having, on average, not less than three hydroxyl groups in each molecule, and an unsaturated monocarboxylic acid monomer (B').
4. (Currently amended) A polycarboxylic acid copolymer  
which is obtained by copolymerization of monomer components comprising a hydroxyl-terminated polyalkylene glycol unsaturated monomer (A2') having a structure such that an oxyalkylene group is bound to a polyhydric alcohol residue having, on average, not less than three hydroxyl groups in each molecule, and an unsaturated carboxylic acid monomer (B).
5. (Original) The polycarboxylic acid copolymer according to Claim 1,

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wherein said monomer components comprise a polyalkylene glycol unsaturated monomer (A3) other than said monomer having an oxyalkylene group.

6. (Original) The polycarboxylic acid copolymer according to Claim 3,  
wherein said monomer components comprise a polyalkylene glycol unsaturated monomer (A3) other than said monomer having an oxyalkylene group.

7. (Original) The polycarboxylic acid copolymer according to Claim 4,  
wherein said monomer components comprise a polyalkylene glycol unsaturated monomer (A3) other than said monomer having an oxyalkylene group.

8. (Currently amended) A method of producing a polycarboxylic acid copolymer  
which comprises copolymerizing monomer components comprising a ~~monomer~~  
(A) polyalkyleneimine unsaturated monomer (A1) having an oxyalkylene group and  
an unsaturated carboxylic acid monomer (B) using a hydrophobic chain transfer  
agent.

9. (Cancelled)

10. (Original) A polycarboxylic acid copolymer  
which is obtained by the method of producing a polycarboxylic acid copolymer  
according to Claim 8.

11. (Withdrawn) A cement additive  
which comprises the polycarboxylic acid copolymer according to Claim 1.

12. (Withdrawn) A cement additive  
which comprises the polycarboxylic acid copolymer according to Claim 3.

13. (Withdrawn) A cement additive  
which comprises the polycarboxylic acid copolymer according to Claim 4.

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14. (Withdrawn-Currently amended) A cement additive which comprises a the polycarboxylic acid copolymer obtained by a method of producing a polycarboxylic acid copolymer comprising copolymerizing monomer components comprising a monomer (A) having an oxyalkylene group and an unsaturated carboxylic acid monomer (B) using a hydrophobic chain transfer agent according to Claim 10.
15. (Withdrawn) A cement additive  
which has a calcium transfer value of 10 to 900 mPa's and/or a cement performance coefficient of 0.05 to 1.0.
16. (Withdrawn) A cement additive  
which has, when purified following adjustment to pH 12 to 12.5, a nitrogen content of 0.1 to 20% by weight as determined by elemental analysis,  
allows detection of morpholine, 4-(2-hydroxyethyl)morpholine and 1,4-dioxane upon pyrolysis GC-MASS,  
shows a peak having no shoulder in GPC,  
has a weight average molecular weight (Mw) of 5,000 to 300,000,  
shows, in IR measurement, an absorption peak at 1640 to 1660  $\text{cm}^{-1}$  whose intensity is not more than 20% of the intensity of the absorption peak occurring at 1710 to 1630  $\text{cm}^{-1}$ ,  
allows detection, in  $^{13}\text{C}$ -NMR, of signals at chemical shift positions of 60 to 61 ppm and 69 to 68 ppm,  
has an NMR-PEG content of 10 to 99% by weight and  
has a TCAV of 3 to 900 mg KOH/g.
17. (Withdrawn) A cement composition which comprises at least water, cement and a cement additive, the cement additive according to Claim 11 being used as said cement additive.

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18. (Withdrawn) A cement composition  
which comprises at least water, cement and a cement additive,  
the cement additive according to Claim 14 being used as said cement additive.
19. (Withdrawn) A cement composition  
which comprises at least water, cement and a cement additive,  
the cement additive according to Claim 15 being used as said cement additive.
20. (Withdrawn) A cement composition  
which comprises at least water, cement and a cement additive,  
the cement additive according to Claim 16 being used as said cement additive.
21. (New) A method of producing a polycarboxylic acid copolymer  
which comprises copolymerizing monomer components comprising a  
polyalkylene glycol unsaturated monomer (A2) having a structure such that an  
oxyalkylene group is bound to a polyhydric alcohol residue having, on average, not less  
than three hydroxyl groups in each molecule and an unsaturated carboxylic acid  
monomer (B) using a hydrophobic chain transfer agent.

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